U.S. Department of Energy, Office of River Protection

Shirley J. Olinger, Acting Manager

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Office of River Protection

CH2MHILL Hanford Group, Inc.

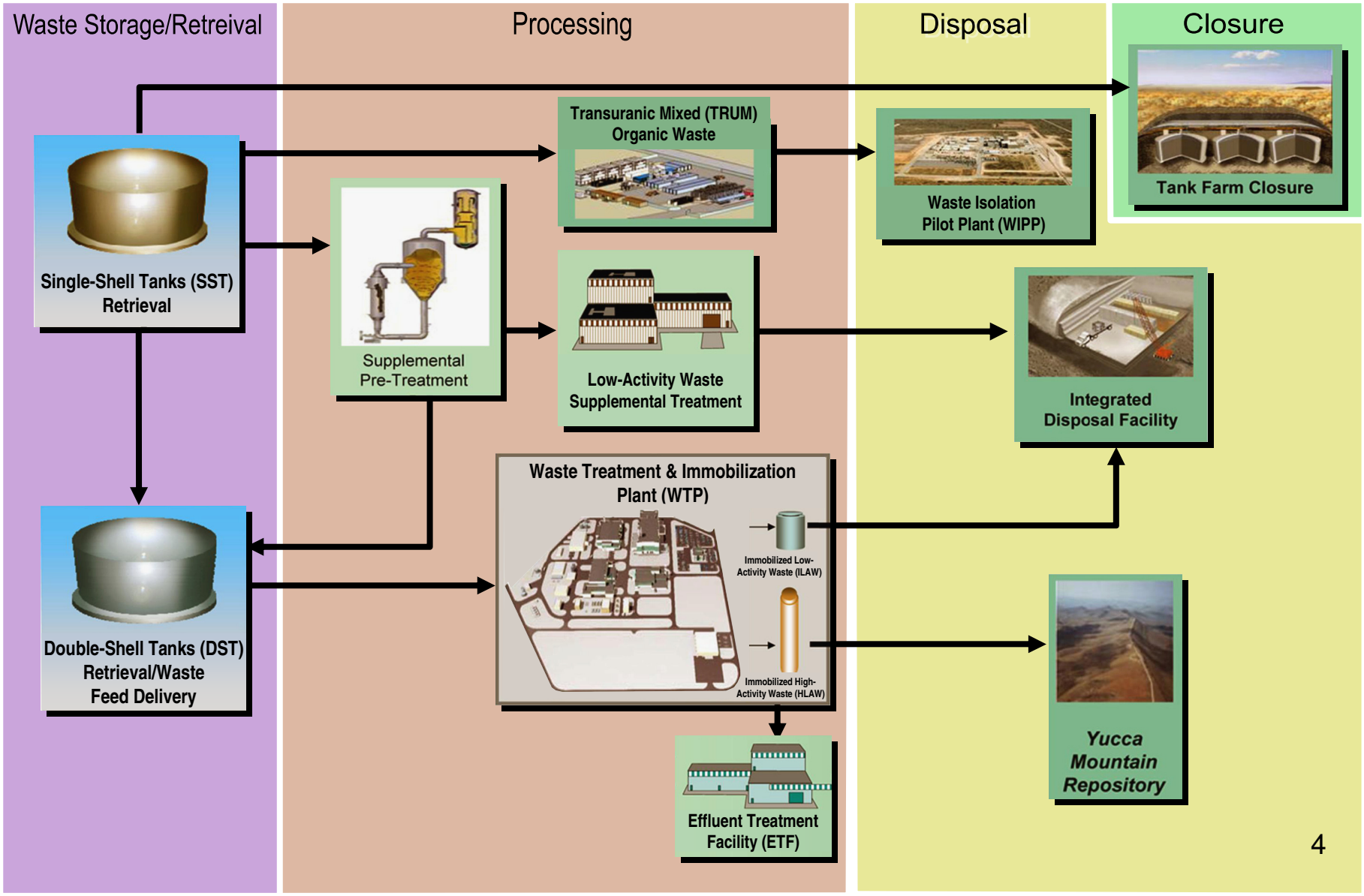
Bechtel National, Inc.

Washington Group International

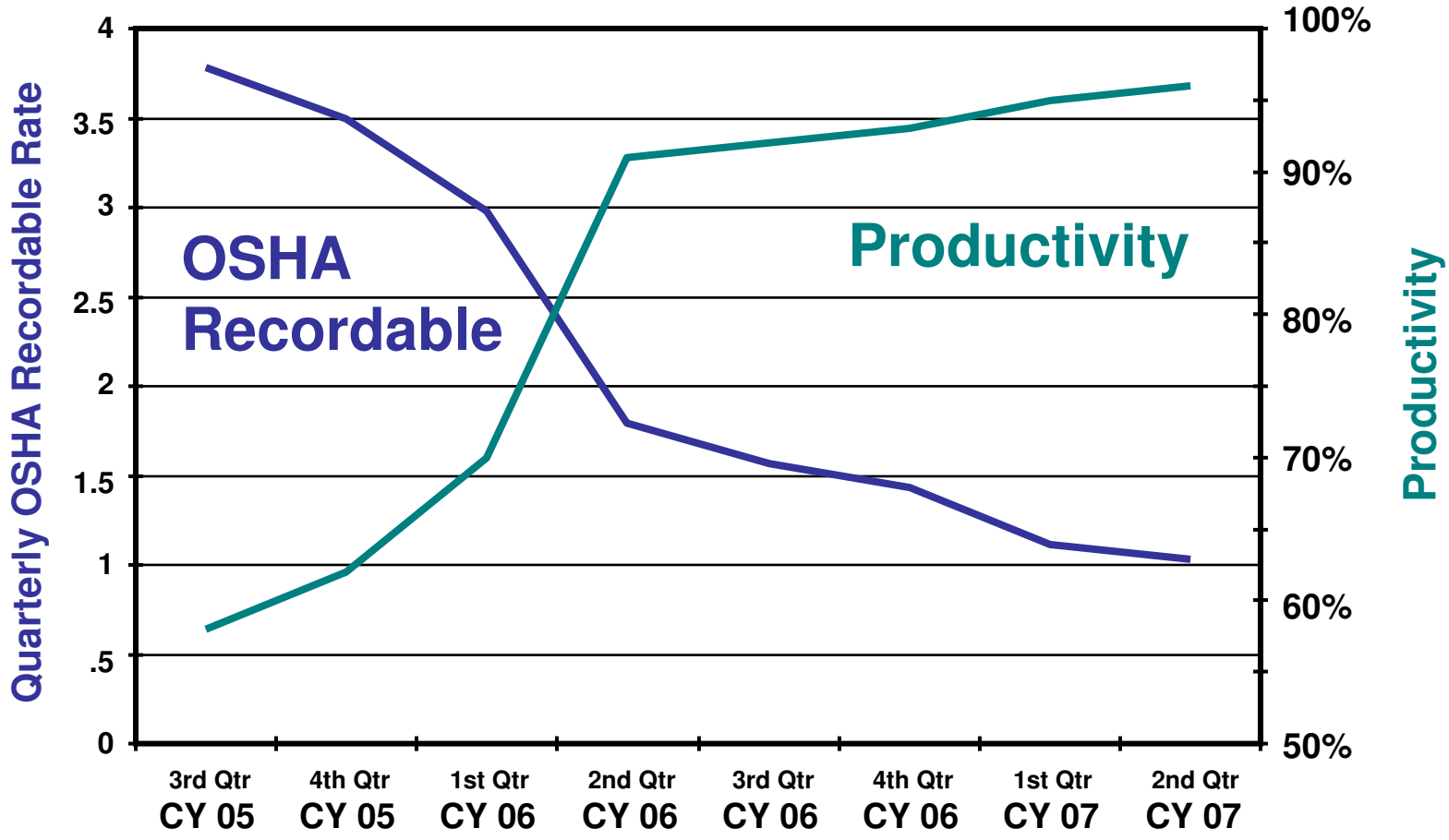
EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

RIVER PROTECTION PROJECT MISSION



Safety Enables Progress



Tank Waste Retrieval Progress

- *Before culture change focus, only one tank retrieved.*

Hanford Tank Farms

CH2M HILL's Super Box was used to ship long-length contaminated equipment to a treatment facility in Richland.

The Rotary Viper, a high pressure mixer, has been successfully installed in tank S-102 to help mobilize and pump stubborn tank waste.

Workers deploy the off-riser sampler system in single-shell tank C-103. Its mission is to obtain waste samples that were previously inaccessible to conventional techniques.

Workers retrieve cameras used in tank C-108 retrieval. Tank C-108 is the ninth Hanford single-shell tank to be in retrieval or completed.

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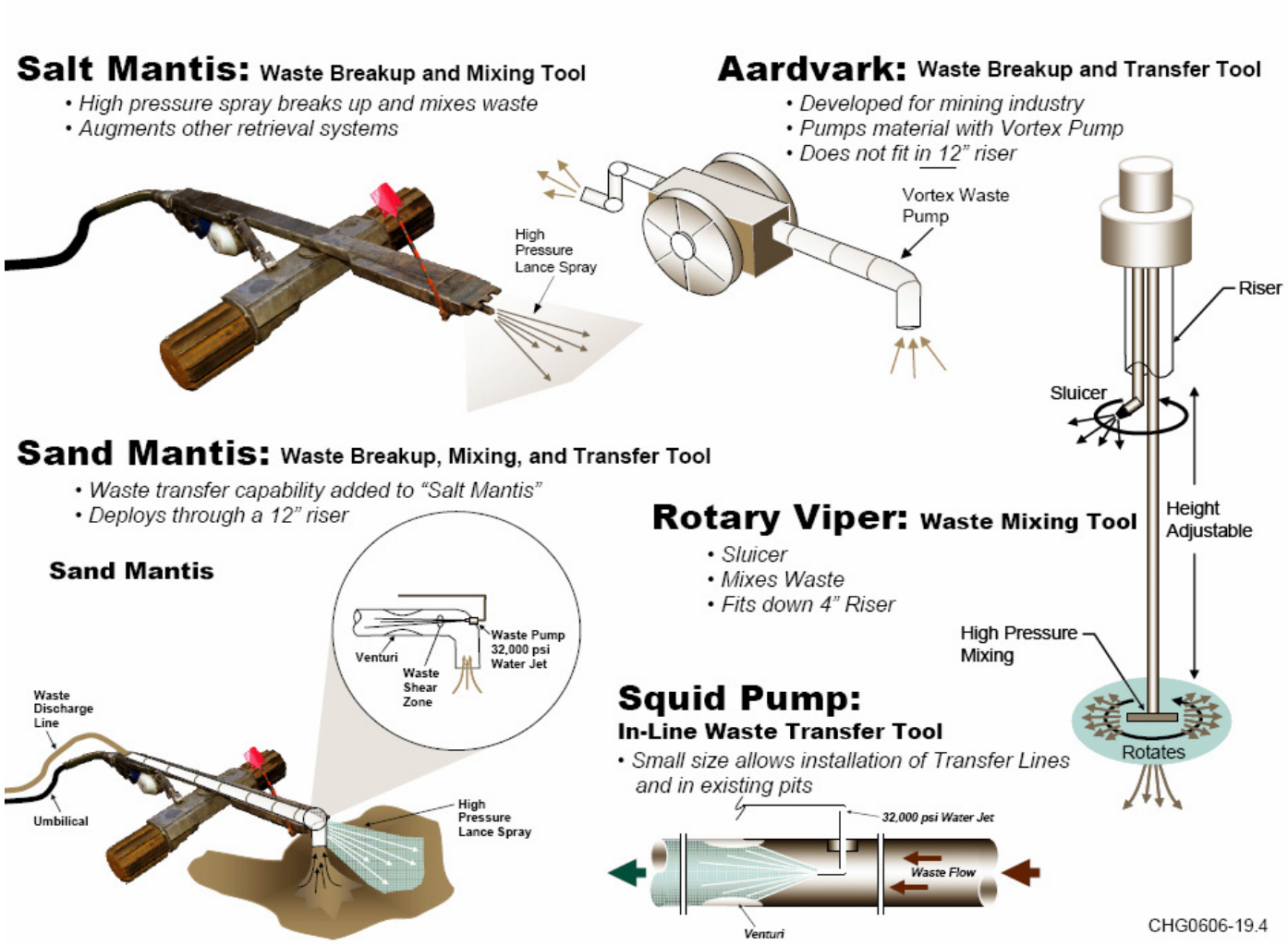
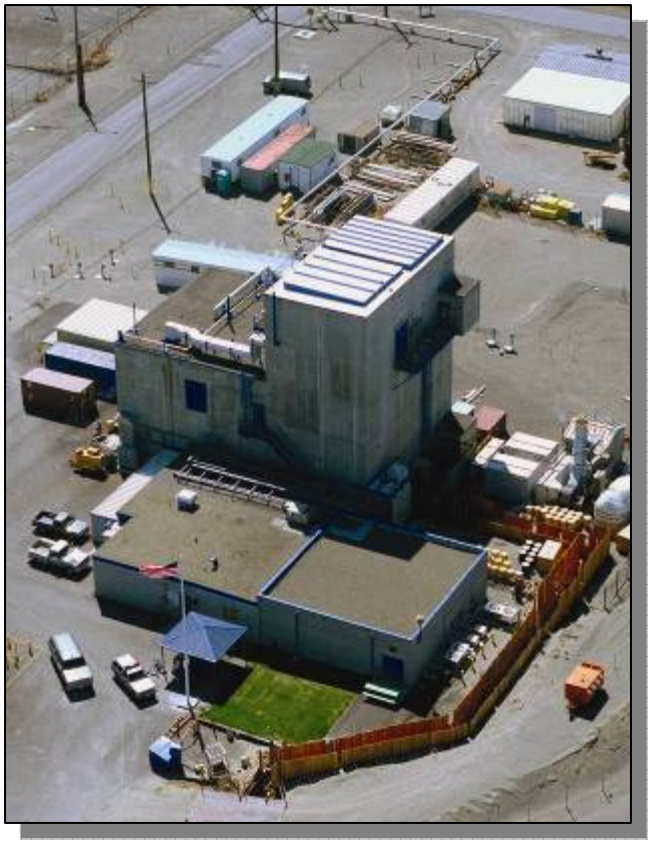
Innovative Tank Waste Retrieval Technologies



Innovative Tank Waste Retrieval Technologies

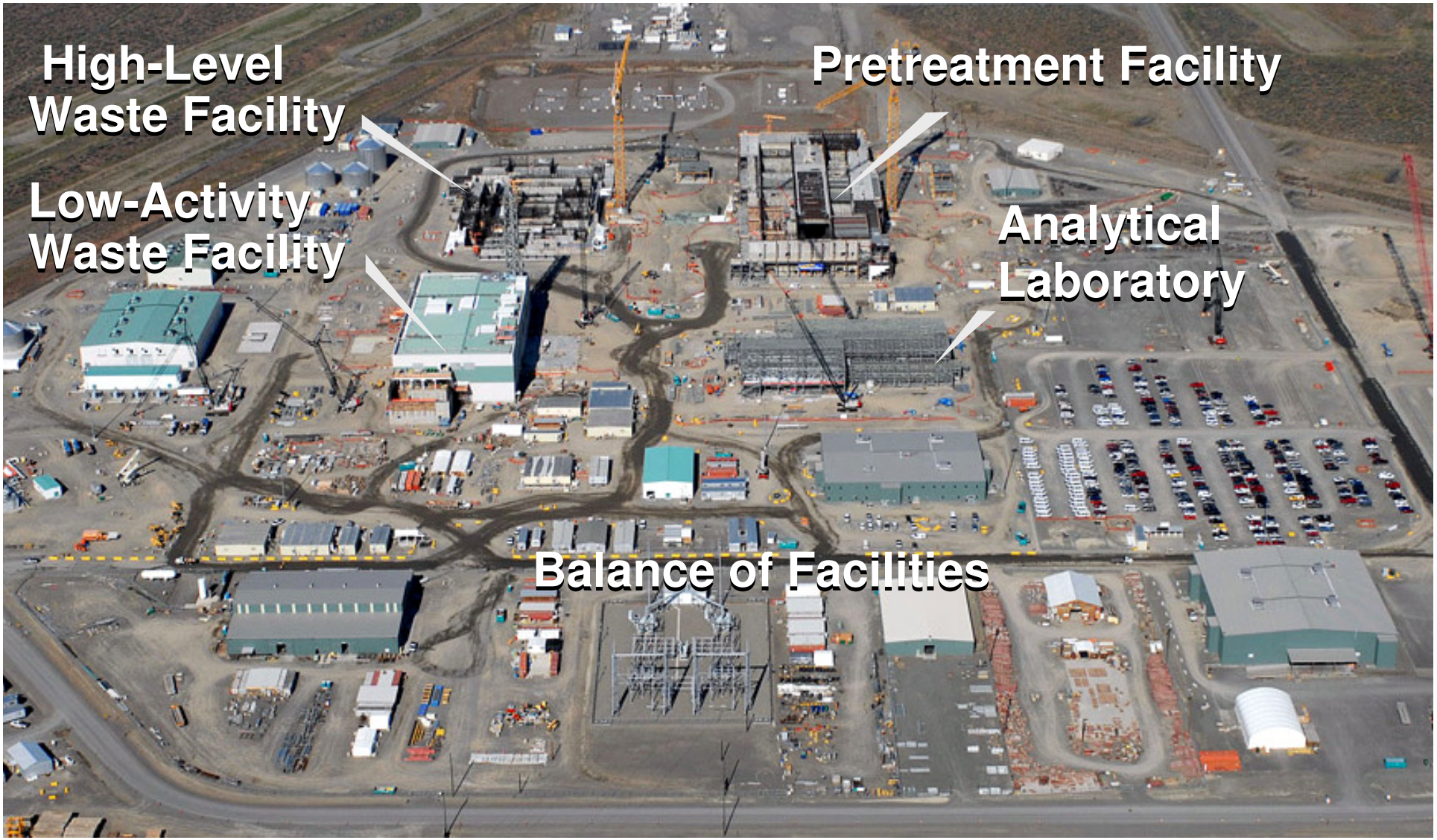
- Technologies based on waste characteristics and each tank's physical condition
- Demonstrating achievability of 99% waste retrieval
- Working with State of Washington and Nuclear Regulatory Commission on retrieval effectiveness
- Managing available Double-Shell tank space

Managing Tank Space



- Increased evaporator campaigns
- Waste Transfers
  - Gain efficient tank operations

Waste Treatment Plant *$12.2 B* *2019 completion*



Waste Treatment and Immobilization Plant

Balance of Facility crews work on a CDF placement for an electrical ductbank north of LAW.

Structural steel was delivered to the Analytical Laboratory at the Construction Site in late November. Erecting structural steel is a significant milestone in the construction of the full-service laboratory.

A pipefitter performs grinding work on a large bore pipe within the Chiller Compressor Plant

A field engineer inspects an expansion joint installed within the Chiller Compressor Plant.

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Waste Treatment and Immobilization Plant

2006 **Evaluating and Validating**

2007 **Implementing change and building momentum**

2008 **Sustaining progress and restoring confidence**

safety ❖ *performance* ❖ *cleanup* ❖ *closure*

Supplemental Technology

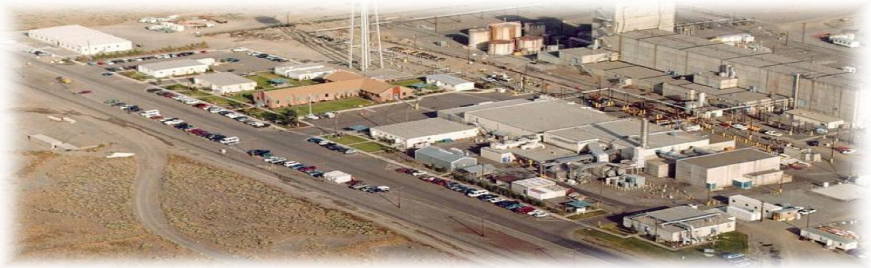
Demonstration Bulk Vitrification System

- Full-Scale Mixer/Dryer Test
- 38D Full-Scale Test
- DBVS Facility Changes
- Critical Decision 2 for DOE

222-S Laboratory

- Purpose
  - Provides process control and characterization

  analyses of intermediate-to-high-level radioactive samples
- Services
  - The laboratory provides a full range of inorganic, organic, and radiochemical analyses, plus development of analytical and process technology
- Performs more than 175 analytical methods
- Ensures capabilities to analyze samples from Hanford's underground waste tanks.
- Supports retrieval, feed preparation, and waste treatment
- Supports other Hanford contractors and projects



Office of River Protection Priorities

- Work Safely
- Demonstration Bulk Vitrification System
- Continue Tank Retrievals
- Resume full construction of the Waste Treatment and Immobilization Plant
- Continue Vadose Zone Characterization
- Complete the Draft Tank Closure and Waste Management Environmental Impact Statement
- Strengthen Project Management and continue to staff up the Office of River Protection organization